We claim:

1. A method for detecting cardiac arrhythmia in a patient, comprising the steps of:

(i) detecting two or more atrial electrical segments in said patient;

(ii) performing an autoregressive analysis on each of said atrial electrical segments, such that two or more test autoregressive coefficients are determined for each of said atrial electrical segments; and

(iii) comparing said test autoregressive coefficients with two or more standard autoregressive coefficients;

wherein, when said standard autoregressive coefficients are derived from one or more patients not suffering from or not at risk of suffering from a cardiac arrhythmia, a detectable difference in said test autoregressive coefficients as compared to said standard autoregressive coefficients indicates that said patient suffers from or is at risk of suffering from a cardiac arrhythmia, and wherein, when said standard autoregressive coefficients are derived from one or more patients suffering from or at risk of suffering from a cardiac arrhythmia, a detectable difference in said test autoregressive coefficients as compared to said standard autoregressive coefficients indicates that said patient does not suffer from or is not at risk of suffering from a cardiac arrhythmia.

2. The method of claim 1, wherein said cardiac arrhythmia is atrial fibrillation.

3. The method of claim 2, further comprising classifying said atrial fibrillation based on said detectable difference.

4. The method of claim 2, wherein said comparing comprises plotting said test autoregressive coefficients with said standard autoregressive coefficients in coefficient space.

5. The method of claim 4, wherein five or more test autoregressive coefficients are determined for each of said atrial electrical segments.

6. The method of claim 4, wherein five test autoregressive coefficients are determined for each of said atrial electrical segments, wherein two or more test autoregressive coefficients are plotted in coefficient space.

7. The method of claim 6, wherein said plotted autoregressive coefficients are subjected to cluster analysis.

8. The method of claim 3, wherein said classified atrial fibrillation is selected from the group consisting of dilated cardiomyopathy, hypertrophic cardiomyopathy, rheumatismal valvular disease, pericarditis, ideopathic atrial fibrillation, and focal atrial fibrillation.

9. The method of claim 1, where said autoregressive analysis accounts for a noise signal.

10. The method of claim 1, wherein said atrial electrical segment comprises an interval between the S peak and the subsequent Q peak.

11. The method of claim 1, wherein atrial electrical segment comprises an interval between about 500 milliseconds before a Q peak about 30 milliseconds before said Q peak.

12. The method of claim 1, wherein atrial electrical segment comprises an interval between about 300 milliseconds before a Q peak about 30 milliseconds before said Q peak.

13. The method of claim 1, wherein atrial electrical segment comprises an interval between about 200 milliseconds before a Q peak about 30 milliseconds before said Q peak.

14. The method of claim 1, wherein said atrial electrical segments are detected with about a 1 kHz sampling frequency.

15. The method of claim 1, wherein said standard autoregressive coefficients are derived from one or more patients without atrial fibrillation.

16. The method of claim 1, wherein said standard autoregressive coefficients are derived from one or more patients with atrial fibrillation, wherein said patients have atrial fibrillation caused by dilated cardiomyopathy, hypertrophic cardiomyopathy, rheumatismal valvular disease, pericarditis, or focal atrial fibrillation.

17. The method of claim 1, wherein said standard autoregressive coefficients comprise a database.

18. A method for identifying a compound that modulates atrial fibrillation, comprising the steps of:

(i) administering said compound to said patient;

(ii) detecting two or more atrial electrical segments in said patient;

(iii) performing an autoregressive analysis on each of said atrial electrical segments, such that two or more test autoregressive coefficients are determined for each of said atrial electrical segments; and

(iv) comparing said test autoregressive coefficients with two or more standard autoregressive coefficients;

wherein a detectable difference in said test autoregressive coefficients as compared to said standard autoregressive coefficients indicates that said candidate agent is a modulator of atrial fibrillation.

19. A method for identifying and classifying an atrial disorder in a patient suffering from or at risk of suffering from said atrial disorder, wherein said atrial disorder results in atrial fibrillation, comprising the steps of:

(i) detecting two or more atrial electrical segments in said patient;

(ii) performing an autoregressive analysis on each of said atrial electrical segments, such that five or more test autoregressive coefficients are determined for each of said atrial electrical segments;

(iii) providing two or more standard autoregressive coefficients, wherein said standard autoregressive coefficients are derived from patients suffering from said atrial disorder;

(iv) plotting said two or more standard autoregressive coefficients and said standard autoregressive coefficients in coefficient space;

(v) comparing said plotted test autoregressive coefficients with said plotted standard autoregressive coefficients;

wherein a detectable similarity in said test autoregressive coefficients as compared to said standard autoregressive coefficients indicates that said patient suffers from or is at risk of suffering from said atrial disorder, and wherein a detectable difference in said test autoregressive coefficients as compared to said standard autoregressive coefficients indicates that said patient does not suffer from is not at risk of suffering from said atrial disorder.

20. The method of claim 19, wherein said classified atrial disorder is selected from the group consisting of dilated cardiomyopathy, hypertrophic cardiomyopathy, rheumatismal valvular disease, pericarditis, ideopathic atrial fibrillation and focal atrial fibrillation.

21. A method for validating a model of atrial fibrillation, comprising the steps of:

(i) generating two or more predicted atrial electrical segments from said model;

(ii) performing an autoregressive analysis on each of said predicted atrial electrical segments, such that five or more autoregressive coefficients are determined for each of said predicted atrial electrical segments;

(iii) providing two or more test autoregressive coefficients, wherein said test autoregressive coefficients are generated by:

a. detecting two or more atrial electrical segments in a mammalian patient suffering from atrial fibrillation; and

b. performing an autoregressive analysis on each of said atrial electrical segments, such that five or more test autoregressive coefficients are determined for each of said atrial electrical segments;

(iv) plotting two or more of said autoregressive coefficients and two or more of said test autoregressive coefficients in coefficient space; and

(v) comparing said plotted test autoregressive coefficients with said plotted predicted autoregressive coefficients;

wherein a detectable similarity in said plotted test autoregressive coefficients as compared to said predicted autoregressive coefficients indicates that said model is valid for atrial fibrillation.

22. A validated model obtainable according to the method of claim 21.

23. A model for atrial fibrillation, comprising a plurality of atrial electrical segments, said plurality derived from two or more classified atrial disorders, wherein said plurality of atrial electrical segments is subjected to an autoregressive analysis on each of said atrial electrical segments, such that two or more autoregressive coefficients are determined for each of said atrial electrical segments.

24. The model of claim 23, wherein said classified atrial disorders are selected from the group consisting of dilated cardiomyopathy, hypertrophic cardiomyopathy, rheumatismal valvular disease, pericarditis, ideopathic atrial fibrillation, and focal atrial fibrillation.

25. The model of claim 24, wherein said atrial electrical segments are ordered using separation techniques, state-space techniques, time-frequency techniques, or generalized choherence techniques.